Stop Sign Warrant based on Gram Traffic North Texas, Inc. Approach Counts (February 2015) and Accident Reports from City Police Department (Alister Lane at Morning Star Intersection)

What are Warrants for Multi-Way Stop Signs per Section 2B.07 of December 2011 MUTCD Manual:

Condition A: Not Applicable.

Condition B. Criteria: Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.

Results from Data Collected:

- No accidents were reported at this intersection in a 12 month period.
- Condition B is not met.

Condition C. Criteria: Minimum Volumes

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and 2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but 3. If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.

Results from Data Collected:

- Number 1 is met above. The highest average based on the traffic count on Morning Star from both approaches was 775 vehicles from 5-6PM. The 775 vehicles counted exceeds the minimum 300 vehicles per hour for any 8 hours of an average day. The minimum 300 vehicles per hour were also exceeded between 6-9AM and 2-8PM.
- Number 2 is not met above. The average volume of vehicular traffic on the minor street of Alister Lane did not meet the 200 units per hour for any hour during the same 8 hours. The highest vehicular volume average was 91 vehicles for this minor street's approach to Morning Star occurring from 7-8AM. Bicycle and pedestrian volumes were not taken as part of this limited study.
- Number 3 is not met above. The 85th percentile approach speed of the major street traffic does not exceed 40 mph per posted speed limit.
- Condition C is not met.

Condition D. Criteria: Where no single criterion is satisfied, but where Criteria B, C.1. and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.

Results from Data Collected:

- Criteria B, C.1, and C.2 are not satisfied to the 80 percent of the minimum values.
- Condition D is not met.

Conclusion: A Multi-Way Stop Sign is not currently warranted at this intersection based on the data collected during this limited study.

GRAM Traffic North Texas, Inc. 1120 W. Lovers Lane Arlington, Texas 76013

MORNING STAR DR @ ALISTER LN - 60 MIN

Date Start: 03-Feb-15

lime Tue NB SB EB Total 2:00 AM 18 8 2 28 01:00 16 4 1 21 02:00 6 12 2 20 03:00 7 15 0 22 04:00 12 44 5 61 05:00 24 119 14 157 06:00 62 340 30 432 07:00 135 594 91 820 08:00 127 295 29 451 09:00 78 142 26 246 10:00 91 124 15 230 11:00 134 130 12 276 2:00 PM 149 102 16 267 02:00 188 134 25 347 03:00 282 150 22 454 04:00 462<	Start	03-Feb-15					
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GRAM Traffic North Texas, Inc. 1120 W. Lovers Lane Arlington, Texas 76013

MORNING STAR DR @ ALISTER LN - 15 MIN

Date Start: 03-Feb-15

Start	03-Feb-1	15				
Time	Tue	NB	SB	EB		Total
12:00 AM		3		2		6
12:15		4	4	0	8	8
12:30		7	0	0		7
12:45		4	3	0		7
01:00		5	1	0		6
01:15		4	1	0		5
01:30		1	2	1		4
01:45		6	0	0		6
02:00		1	1	0		2
02:15		1	3	0		2 4
02:30		1	6	2		9
02:45		3	2 2 2	0		9 5 5 5 7
03:00		3	2	0		5
03:15		3	2	0		5
03:30		0	7	0		7
03:45		1	4	0		5
04:00		3	6	0		9
04:15		3 4	14	1		19
04:30		2	12	0		14
04:45		2 3 3	12	4		19
05:00		3	18	3		24
05:15		8	19	4		31
05:30		4	38	2		44
05:45		9	44	5	ii.	58
06:00		7	44	6		57
06:15		10	72	2		84
06:30		21	105	8		134
06:45		24	119	14		157
07:00		30	124	16		170
07:15		26	132	19		177
07:30		45	196	28		269
07:45		34	142	28		204
08:00		40	100	13		153
08:15		48	73	2		123
08:30		26	76	4		106
08:45		13	46	10		69
09:00		12	46	8		66
09:15		19	38	4		61
09:30		20	38	8		66
09:45		27	20	6		53
10:00		15	29	4		48
10:15		20	31	3		54
10:30		25	32	6		63
10:45		31	32	2		65
11:00		28	30	4		62
11:15		30	34	4		68
11:30		47	32	2		81
11:45		29	34	2		65
Total	112 111 -111 -	710	1827	227		2764
Percent		25.7%	66.1%	8.2%		4104
Peak		07:30	07:00	07:00		07:00
Vol.		167	594	91		820
P.H.F.		0.870	0.758	0.813		0.762
Falle.		0.070	0.750	0.013		0.702

GRAM Traffic North Texas, Inc. 1120 W. Lovers Lane Arlington, Texas 76013

MORNING STAR DR @ ALISTER LN - 15 MIN

Date Start: 03-Feb-15

Start Time	03-Feb-15 Tue		OD.	го		5 44 054215
12:00 PM	rue	NB 36	SB 44	EB 9		Total
12.00 FW				9		
12:15		43	34	2		7
12:30		31	34	4		6
12:45		39	30	6		7
01:00		34	25	7		6
01:15		44	24	7		7 6
01:30		37	28	0		6
01:45		34	25	2		6
02:00		31	42	3		7
02:15		59	32	10		10
02:30		52	24	8		8
02:45		46	36	4		
						8
03:00		48	45	7		10
03:15		51	25	6		8
03:30		74	48	5		12
03:45		109	32	4		14
04:00		95	42	8		14
04:15		115	46	6		16
04:30		128	39	7		17
04:45		124	48	5		17
05:00		145	35	9		18
05:15		162	40	7		
05:30		152				20
			48	7		20
05:45		158	35	8		20
06:00		140	39	2		18
06:15		137	46	11		19
06:30		113	34	9		15
06:45		86	32	6		12
07:00		66	30	7		10
07:15		57	26	5		8
07:30		58	23	5		8
07:45		50	20	5		7
08:00		52	24	1		7
08:15		64	18	6		,
						8
08:30		43	26	2		7
08:45		42	21	3		6
09:00		36	24	1		6
09:15		33	14	3		50
09:30		32	14	1		4
09:45		30	16	1		4
10:00		22	8	1		3
10:15		30	7	2		39
10:30		23	4	0		2
10:45		18	5	1		24
11:00		14	5	Ó		19
11:15		12	6			
				2		20
11:30		11	4	0		15
11:45		13	3	2		18
Total		3029	1310	217		4556
Percent		66.5%	28.8%	4.8%		
Peak		17:00	16:00	18:15		17:00
Vol.		617	175	33		806
P.H.F.		0.952	0.911	0.750		0.964
Grand Tota	1				14	7
Percent		51.			%	